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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 4	DEC 08	INPADOC: Legal Status data reloaded
NEWS 5	SEP 29	DISSABS now available on STN
NEWS 6	OCT 10	PCTFULL: Two new display fields added
NEWS 7	OCT 21	BIOSIS file reloaded and enhanced
NEWS 8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9	NOV 24	MSDS-CCOHS file reloaded
NEWS 10	DEC 08	CABA reloaded with left truncation
NEWS 11	DEC 08	IMS file names changed
NEWS 12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS 13	DEC 09	STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS 14	DEC 17	DGENE: Two new display fields added
NEWS 15	DEC 18	BIOTECHNO no longer updated
NEWS 16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS 17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19	DEC 22	ABI-INFORM now available on STN
NEWS 20	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 21	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS 22	FEB 05	German (DE) application and patent publication number format changes

NEWS EXPRESS	DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:36:20 ON 19 FEB 2004

=> fil reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 17:36:31 ON 19 FEB 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 FEB 2004 HIGHEST RN 651705-73-6
DICTIONARY FILE UPDATES: 18 FEB 2004 HIGHEST RN 651705-73-6

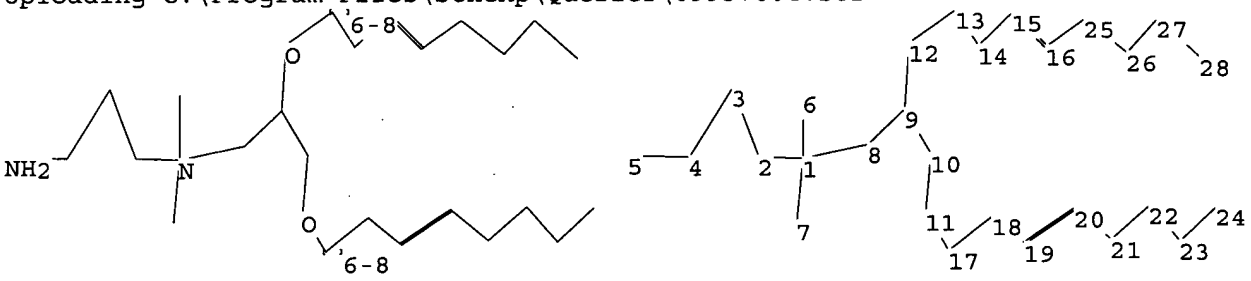
TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading C:\Program Files\Stnexp\Queries\09937604.str



chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
chain bonds :
1-2 1-6 1-7 1-8 2-3 3-4 4-5 8-9 9-10 9-12 10-11 11-17 12-13 13-14 14-15 15-16 16-25 17-18 18-19 19-20 20-21 21-22 22-23 23-24 25-26 26-27 27-28
exact/norm bonds :
1-2 1-6 1-7 1-8 4-5 9-12 10-11 11-17 12-13
exact bonds :
2-3 3-4 8-9 9-10 13-14 14-15 15-16 16-25 17-18 18-19 19-20 20-21 21-22 22-23 23-24 25-26 26-27 27-28

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS

```
L1      STRUCTURE UPLOADED

=> d query
L1              STR
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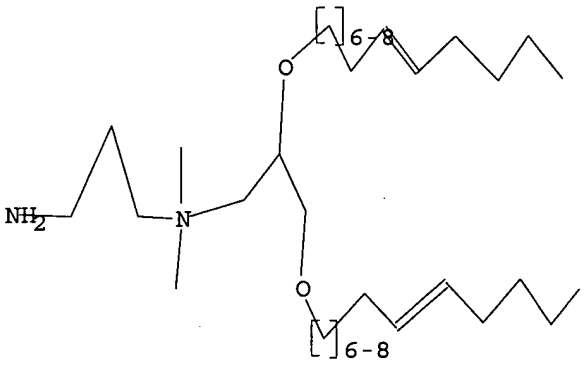


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Structure attributes must be viewed using STN Express query preparation.


=> s l1
SAMPLE SEARCH INITIATED 17:36:47 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      2 TO ITERATE

100.0% PROCESSED       2 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:            2 TO      124
PROJECTED ANSWERS:               0 TO        0

L2             0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 17:36:51 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     28 TO ITERATE

100.0% PROCESSED      28 ITERATIONS                                4 ANSWERS
SEARCH TIME: 00.00.01

L3             4 SEA SSS FUL L1

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   155.42     155.63

FILE 'CAPLUS' ENTERED AT 17:36:55 ON 19 FEB 2004
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```

FILE COVERS 1907 - 19 Feb 2004 VOL 140 ISS 8
FILE LAST UPDATED: 18 Feb 2004 (20040218/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 6 L3

=> d l4 1-6 abs ibib hitstr

L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

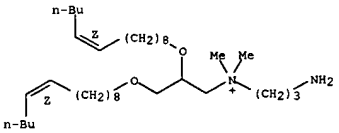
AB Vaxfectin, a recently developed adjuvant, was evaluated for its enhancing effect on immunogenicity of a Japanese encephalitis (JE) DNA vaccine plasmid encoding the JE virus premembrane (prM) and envelope (E) genes (designated pcJEME), using BALB/c and ICR mice. Formulation of pcJEME with Vaxfectin provided ≥8-fold higher neutralizing antibody titers than those induced by pcJEME alone and reduced the amount of pcJEME to one-tenth to induce comparable levels of neutralizing antibody. Use of Vaxfectin did not alter a Th1 type IgG isotype immune response (IgG1 < IgG2a) induced by pcJEME in mice. Thus, Vaxfectin has an ability to enhance immunogenicity of pcJEME and is considered as a useful adjuvant for DNA vaccines in murine exptl. models.

ACCESSION NUMBER: 2003:469912 CAPLUS
DOCUMENT NUMBER: 139:178416
TITLE: Enhancing Effect of Vaxfectin on the Ability of a Japanese Encephalitis DNA Vaccine to Induce Neutralizing Antibody in Mice
AUTHOR(S): Nukuzuma, Chiyoko; Ajiro, Naoko; Wheeler, Carl J.; Konishi, Eiji
CORPORATE SOURCE: Department of Health Sciences, Kobe University School of Medicine, Kobe, Japan
SOURCE: Viral Immunology (2003), 16(2), 183-189
CODEN: VIIMET; ISSN: 0882-8245
PUBLISHER: Mary Ann Liebert, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **370108-99-9**, Vaxfectin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Vaxfectin adjuvant enhancement of Japanese encephalitis virus DNA vaccine induction of neutralizing antibodies in mouse model)
RN 370108-99-9 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide, mixt. with (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl bis(3,7,11,15-tetramethylhexadecanoate) (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 370108-98-8
CMF C36 H73 N2 O2 . Br

Double bond geometry as shown.



● Br⁻

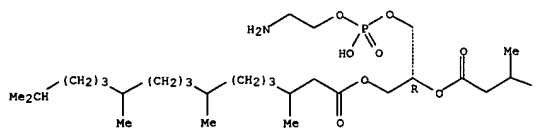
CM 2

L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

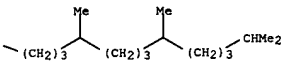
CRN 201036-16-0
CMF C45 H90 N O8 P

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AB Mice were vaccinated with plasmid DNA (pDNA) encoding antigen 85A (Ag85A), Ag85B, or PstS-3 from Mycobacterium tuberculosis either in saline or formulated for i.m. injections in VC1052:DPyPE (aminopropyl-dimethyl-myristoleyloxy-propanaminium bromide-diphytanoylphosphatidyl-ethanolamine) (Vaxfectin; Vical, Inc., San Diego, Calif.) or for intranasal instillations in GAP-DLRIE:DOPE (aminopropyl-dimethyl-bis-dodecyloxy-propanaminium bromide-dioleoylphosphatidyl-ethanolamine). These two novel cationic and neutral colipid formulations were previously reported to be effective adjuvants for pDNA-induced antibody responses. The levels of Ag85-specific total IgG (IgG) and IgG isotypes were all increased 3- to 10-fold by formulation of pDNA in Vaxfectin. The level of production of splenic T-cell-derived Th1-type cytokines (interleukin-2 and gamma interferon) in response to purified Ag85 and to synthetic peptides spanning the entire Ag85A protein was also significantly higher in animals vaccinated with pDNA formulated in Vaxfectin. Cytolytic T-lymphocyte responses generated by pDNA encoding phosphate-binding protein PstS-3 in Vaxfectin were better sustained over time than were those generated by PstS-3 DNA in saline. Intranasal immunization with Ag85A DNA in saline was completely ineffective, whereas administration in GAP-DLRIE: DOPE induced a pos. Th1-type cytokine response; however, the extent of the latter response was clearly lower than that obtained following i.m. immunization with the same DNA dose. Combined i.m. and intranasal administrations in cationic lipids resulted in stronger immune responses in the spleen and, more importantly, in the lungs as well. Finally, formulation in Vaxfectin increased the protective efficacy of the Ag85B DNA vaccine, as measured by reduced relative light unit counts and CFU counts in the spleen and lungs from mice challenged with bioluminescent M. tuberculosis H37Rv. These results may be of importance for future clin. use of DNA vaccines in humans.

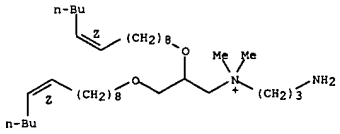
ACCESSION NUMBER: 2002:489711 CAPLUS
DOCUMENT NUMBER: 138:226501
TITLE: Improved tuberculosis DNA vaccines by formulation in cationic lipids
AUTHOR(S): D'Souza, S.; Rosseels, V.; Denis, O.; Tanghe, A.; De Smet, N.; Jurion, F.; Palfliet, K.; Castiglioni, N.; Vanonckelen, A.; Wheeler, C.; Huygen, K.
CORPORATE SOURCE: Mycobacterial Immunology, Pasteur Institute of Brussels, Brussels, B1180, Belg.
SOURCE: Infection and Immunity (2002), 70(7), 3681-3688
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **370108-99-9**, Vaxfectin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tuberculosis DNA vaccines formulated in cationic lipids)
RN 370108-99-9 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide, mixt. with (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl bis(3,7,11,15-tetramethylhexadecanoate) (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 370108-98-8

L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CMF C36 H73 N2 O2 . Br

Double bond geometry as shown.



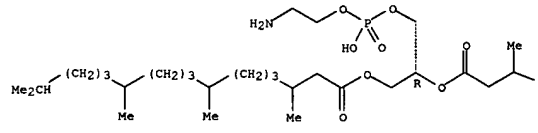
● Br⁻

CM 2

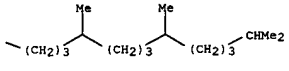
CRN 201036-16-0
CMF C45 H90 N O8 P

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AB The large number of cytofectin and co-lipid combinations currently used for lipoplex-mediated gene delivery reflects the fact that the optimal cytofectin/co-lipid combination varies with the application. The effects of structural changes in both cytofectin and co-lipid were systematically examined to identify structure-activity relationships. Specifically, alkyl' chain length, degree of unsatn. and the head group to which the alkyl side chain was attached were examined to determine their effect on lipoplex structure and biol. activity. The macroscopic lipoplex structure was assessed using a dye-binding assay and the biol. activity was examined using in vitro transfection in three diverse cell lines. Lipoplexes were formulated in three different vehicles currently in use for in vivo delivery of naked plasmid DNA (pDNA) and lipoplex formulations. The changes in dye accessibility were consistent with structural changes in the lipoplex, which correlated with alterations in the formulation. In contrast, transfection activity of different lipoplexes was cell type and vehicle dependent and did not correlate with dye accessibility. Overall, the results show a correlation between transfection and enhanced membrane fluidity in both the lipoplex and cellular membranes.

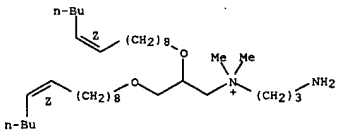
ACCESSION NUMBER: 2002:325272 CAPLUS
DOCUMENT NUMBER: 138:61130
TITLE: Synergy between cationic lipid and co-lipid determines the macroscopic structure and transfection activity of lipoplexes
AUTHOR(S): Ferrari, Marilyn E.; Rusalov, Denis; Enas, Joel; Wheeler, Carl J.
CORPORATE SOURCE: Department of Chemistry, Vical Incorporated, San Diego, CA, 92121, USA
SOURCE: Nucleic Acids Research (2002), 30(8), 1808-1816
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **370108-98-8P 479200-95-8P**
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synergy between cationic lipid and co-lipid dets. the macroscopic structure and transfection activity of lipoplexes)

RN 370108-98-8 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.

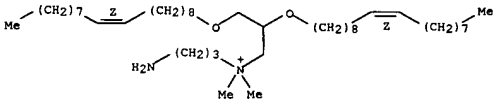
L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● Br⁻

RN 479200-95-8 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-octadecenyloxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



● Br⁻

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AB Antigen specific immune responses were characterized after i.m. immunization of BALB/c mice with 5 antigen encoding plasmid DNAs (pDNAs) complexed with Vaxfectin, a cationic lipid formulation. Vaxfectin increased IgG titers for all of the antigens with no effect on the CTL responses to the 2 antigens for which CTL assays were performed. Both antigen specific IgG1 and IgG2a were increased, although IgG2a remained greater than IgG1. Furthermore, Vaxfectin had no effect on IFN-γ or IL-4 production by splenocytes re-stimulated with antigen, suggesting that the Th1 type responses typical of i.m. pDNA immunization were not altered. Studies with IL-6 -/- mice suggest that the antibody enhancement is IL-6 dependent and results in a correlative increase in antigen specific antibody secreting cells.

ACCESSION NUMBER: 2001:409275 CAPLUS
DOCUMENT NUMBER: 136:198465
TITLE: Vaxfectin enhances antigen specific antibody titers and maintains Th1 type immune responses to plasmid DNA immunization
AUTHOR(S): Reyes, L.; Hartikka, J.; Bozoukova, V.; Sukhu, L.; Nishioka, W.; Singh, G.; Ferrari, M.; Enas, J.; Wheeler, C. J.; Manthorpe, M.; Wloch, M. K.
CORPORATE SOURCE: Department of Cell Biology, Vical Incorporated, San Diego, CA, 92121, USA
SOURCE: Vaccine (2001), 19(27), 3778-3786
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **370108-99-9**, Vaxfectin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Vaxfectin enhanced antigen-specific antibody titers maintaining Th1 type immune responses to plasmid DNA vaccines)

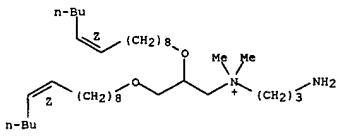
RN 370108-99-9 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide, mixt. with (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl bis(3,7,11,15-tetramethylhexadecanoate) (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 370108-98-8
CMF C36 H73 N2 O2 . Br

Double bond geometry as shown.

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



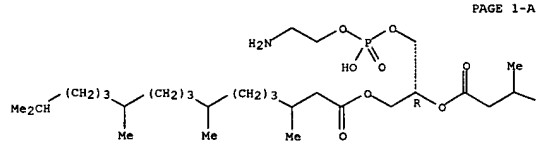
● Br⁻

CM 2

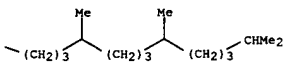
CRN 201036-16-0
CMF C45 H90 N O8 P

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AB This report characterizes Vaxfectin, a novel cationic and neutral lipid formulation which enhances antibody responses when complexed with an antigen-encoding plasmid DNA (pDNA). In mice, i.m. injection of Vaxfectin formulated with pDNA encoding influenza nucleoprotein (NP) increased antibody titers ≤ 20-fold, to levels that could not be reached with pDNA alone. As little as 1 μg of pDNA formulated with Vaxfectin per muscle resulted in higher anti-NP titers than that obtained with 25 μg naked pDNA. The antibody titers in animals injected with Vaxfectin-pDNA remained higher than in the naked pDNA controls for at least 9 mo. The enhancement in antibody titers was dependent on the Vaxfectin dose and was accomplished without diminishing the strong anti-NP cytolytic T cell response typical of pDNA-based vaccines. In rabbits, complexing pDNA with Vaxfectin enhanced antibody titers ≤ 50-fold with needle and syringe injections and also augmented humoral responses when combined with a needle-free injection device. Vaxfectin did not facilitate transfection and/or increase synthesis of β-galactosidase reporter protein in muscle tissue. ELISPOT assays performed on bone marrow cells from vaccinated mice showed that Vaxfectin produced a 3- to 5-fold increase in the number of NP-specific plasma cells. Thus, Vaxfectin should be a useful adjuvant for enhancing pDNA-based vaccinations.

ACCESSION NUMBER: 2001:146642 CAPLUS
DOCUMENT NUMBER: 135:330213
TITLE: Vaxfectin enhances the humoral immune response to plasmid DNA-encoded antigens
AUTHOR(S): Hartikka, J.; Bozoukova, V.; Ferrari, M.; Sukhu, L.; Enas, J.; Sawdey, M.; Wloch, M. K.; Tonsky, K.; Norman, J.; Manthorpe, M.; Wheeler, C. J.
CORPORATE SOURCE: Department of Cell Biology, Vical Incorporated, San Diego, CA, 92121, USA
SOURCE: Vaccine (2001), 19(15-16), 1911-1923
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **370108-99-9P**, Vaxfectin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Vaxfectin enhances the humoral immune response to plasmid DNA-encoded antigens)

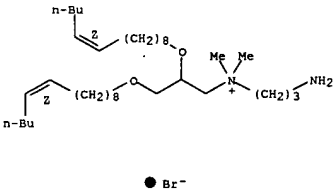
RN 370108-99-9 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide, mixt. with (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl bis(3,7,11,15-tetramethylhexadecanoate) (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 370108-98-8
CMF C36 H73 N2 O2 . Br

Double bond geometry as shown.

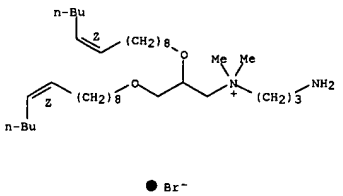
L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● Br⁻

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



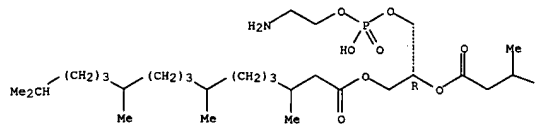
● Br⁻

CM 2

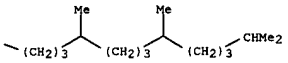
CRN 201036-16-0
CMF C45 H90 N O8 P

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



IT **370108-98-8P**, VC 1052
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Vaxfectin enhances the humoral immune response to plasmid DNA-encoded antigens)

RN 370108-98-8 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L4 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AB A series of 2,3-dialkyloxypropyl quaternary ammonium lipids containing hydroxyalkyl chains on the quaternary amine were synthesized, formulated with dioleoylphosphatidylethanolamine (DOPE) and assayed for their ability to enhance the activity of an intercellular adhesion mol. 1 (ICAM-1) antisense oligonucleotide, ISIS 1570. Cationic liposomes prepared with hydroxyethyl, hydroxypropyl, and hydroxybutyl substituted cationic lipid all enhanced the activity of the ICAM-1 antisense oligonucleotide. Cationic lipids containing hydroxypentyl quaternary amines only marginally enhanced the activity of ISIS 1570. Hydroxyethyl cationic lipids synthesized with dimyristyl (C14:0) and dioleyl (C18:1) alkyl chains were equally effective. Activity of cationic lipids containing saturated alkyl groups decreased as the chain length increased, i.e. the dimyristyl (C14:0) was more effective than dipalmityl (C16:0) lipid, which was more effective than distearyl (C18:0). The phase transition temperature of cationic lipids containing saturated aliphatic chains was 56 for the distearyl lipid, 42 for the dipalmityl lipid, and 24° for the dimyristyl lipid. Cationic lipids with dioleyl alkyl chains required DOPE for activity, with optimal activity occurring at 50 mol%. In contrast, a dimyristyl containing cationic lipid did not require DOPE to enhance the activity of ISIS 1570. Formulation with different phosphatidylethanolamine derivs., revealed that optimal activity was obtained with DOPE. These studies demonstrate that several cationic lipid species enhance the activity of phosphorothioate antisense oligonucleotides and provide further information on the mechanism by which cationic lipids enhance the activity of phosphorothioate oligodeoxynucleotides.

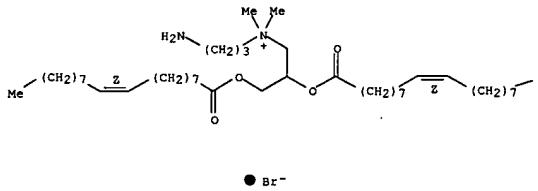
ACCESSION NUMBER: 1998:229461 CAPLUS
DOCUMENT NUMBER: 129:19588
TITLE: Structural requirements for cationic lipid mediated phosphorothioate oligonucleotides delivery to cells in culture
AUTHOR(S): Bennett, C. F.; Mirejovsky, D.; Crooke, R. M.; Tsai, Y. J.; Felgner, J.; Sridhar, C. N.; Wheeler, C. J.; Felgner, P. L.
CORPORATE SOURCE: ISIS Pharmaceuticals, Carlsbad, CA, 92008, USA
SOURCE: Journal of Drug Targeting (1998), 5(3), 149-162
CODEN: JDTAEH; ISSN: 1061-186X
PUBLISHER: Harwood Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **207602-65-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(structural requirements for cationic liposome mediated phosphorothioate oligonucleotides delivery to cells)

RN 207602-65-1 CAPLUS
CN 1-Propanaminium, N-(3-aminopropyl)-N,N-dimethyl-2,3-bis[[(9Z)-1-oxo-9-octadecenyl]oxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

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CA SUBSCRIBER PRICE                                        -4.16      -4.16

FILE 'REGISTRY' ENTERED AT 17:38:58 ON 19 FEB 2004
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STRUCTURE FILE UPDATES:   18 FEB 2004  HIGHEST RN 651705-73-6
DICTIONARY FILE UPDATES:  18 FEB 2004  HIGHEST RN 651705-73-6

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information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> s GAP-DMORIE/cn
L5            1 GAP-DMORIE/CN

=> d l5
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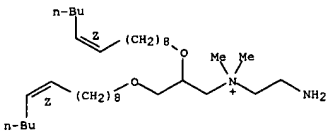
L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 299207-54-8 REGISTRY
CN 1-Propanaminium, N-(2-aminoethyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **GAP-DMORIE**
FS STEREOSEARCH
MF C35 H71 N2 O2 . Br
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Double bond geometry as shown.



● Br⁻

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FULL ESTIMATED COST                                     6.62     192.10

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FILE COVERS 1907 - 19 Feb 2004  VOL 140 ISS 8
FILE LAST UPDATED: 18 Feb 2004  (20040218/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s 299207-54-8/rn
             3 299207-54-8
             0 299207-54-8D
L6           3 299207-54-8/RN
                 (299207-54-8 (NOTL) 299207-54-8D )

=> d l6 abs ibib hitstr
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L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

AB The present invention relates to pharmaceutical compns. and methods to improve expression of exogenous polypeptides into vertebrate cells in vivo, utilizing delivery of polynucleotides encoding such polypeptides. More particularly, the present invention provides the use of salts, in particular sodium and potassium salts of phosphate, in aqueous solution, and auxiliary agents, in particular detergents and surfactants, in pharmaceutical compns. and methods useful for direct polynucleotide-based polypeptide delivery into the cells of vertebrates.

ACCESSION NUMBER: 2001:798084 CAPLUS
DOCUMENT NUMBER: 135:348865
TITLE: Compositions and methods for in vivo delivery of polynucleotide-based therapeutics
INVENTOR(S): Hartikka, Jukka; Sukhu, Loretta; Manthorpe, Marston
PATENT ASSIGNEE(S): Vical Incorporated, USA
SOURCE: PCT Int. Appl., 176 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

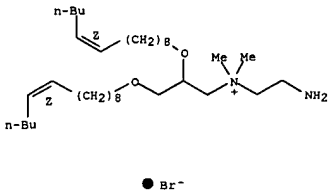
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001080897	A2	20011101	WO 2001-US12975	20010423
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002019358	A1	20020214	US 2001-839574	20010423
EP 1278551	A2	20030129	EP 2001-928741	20010423
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 2000-198823P P 20000421
US 2000-253153P P 20001128
WO 2001-US12975 W 20010423

IT **299207-54-8**, Gap-dmorie
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(compns. and methods for in vivo delivery of polynucleotide-based therapeutics)
RN 299207-54-8 CAPLUS
CN 1-Propanaminium, N-(2-aminoethyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



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=> d l6 2-3 abs ibib hitstr

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

AB A method of increasing the strength of the immune response of vector vaccines using an expression vector for the Flt3 ligand is described. The vaccines are made of independent non-integrating expression vectors: one encodes the antigen or a cytokine and the other encodes the Flt3 ligand. The present invention also provides a method broadly directed to improving immune response of a vertebrate in need of immunotherapy by administering in vivo, into a tissue of a vertebrate, a Flt-3 ligand-encoding polynucleotide and one or more antigen- or cytokine-encoding polynucleotides. The polynucleotides are incorporated into the cells of the vertebrate in vivo, and a prophylactically or therapeutically effective amount of a Flt-3 ligand and one or more antigens is produced in vivo.

ACCESSION NUMBER: 2001:101291 CAPLUS
DOCUMENT NUMBER: 134:161880
TITLE: cDNAs encoding the Flt-3 receptor ligand and there use as adjuvants in vector vaccines
INVENTOR(S): Hermanson, Gary George
PATENT ASSIGNEE(S): Vical Inc., USA
SOURCE: PCT Int. Appl., 148 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001009303	A2	20010208	WO 2000-US20679	20000731
WO 2001009303	A3	20010816		

W: CA, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

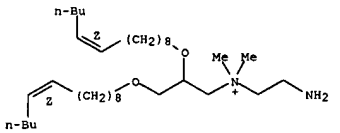
PRIORITY APPLN. INFO.: US 1999-146170P P 19990730

IT **299207-54-8**, GAP-DMORIE
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(in delivery of vector vaccines; cDNAs encoding Flt-3 receptor ligand and there use as adjuvants in vector vaccines)

RN 299207-54-8 CAPLUS
CN 1-Propanaminium, N-(2-aminoethyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



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L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

AB The invention provides adjuvants, immunogenic compns., and methods useful for polynucleotide-based vaccination and immune response. In particular, the invention provides an adjuvant of cytofectin:co-lipid mixture wherein cytofectin is GAP-DMORIE.

ACCESSION NUMBER: 2000:707018 CAPLUS
DOCUMENT NUMBER: 133:280556
TITLE: Adjuvant compositions and methods for enhancing immune responses to polynucleotide-based vaccines
INVENTOR(S): Wheeler, Carl J.
PATENT ASSIGNEE(S): Vical Incorporated, USA
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057917	A2	20001005	WO 2000-US8282	20000324
WO 2000057917	A3	20010104		

W: CA, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

EP 1165140	A2	20020102	EP 2000-919777	20000324
JP 2002540173	T2	20021126	JP 2000-607666	20000324
US 6586409	B1	20030701	US 2000-534943	20000324
US 2003191082	A1	20031009	US 2003-391216	20030319

EP 1165140: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

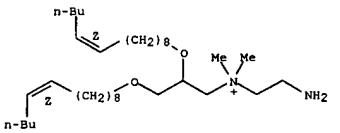
PRIORITY APPLN. INFO.:
US 1999-126340P P 19990326
US 2000-534943 A3 20000324
WO 2000-US8282 W 20000324
US 2001-937604 A1 20010926

IT **299207-54-8**, GAP-DMORIE
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(adjuvant compns. containing cytofectin:co-lipid mixts. and methods for enhancing immune responses to polynucleotide-based vaccines)

RN 299207-54-8 CAPLUS
CN 1-Propanaminium, N-(2-aminoethyl)-N,N-dimethyl-2,3-bis[(9Z)-9-tetradecenyloxy]-, bromide (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



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4	1	("20030191082").PN.	USPAT; US-PGPUB	2004/02/19 18:43
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